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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN JOSE DIVISION**

IN RE HIGH-TECH EMPLOYEE  
ANTITRUST LITIGATION  
  
THIS DOCUMENT RELATES TO:  
  
ALL ACTIONS.

No. Master Docket No. 11-CV-2509LHK

**DEFENDANTS' NOTICE OF MOTION  
AND MOTION TO STRIKE THE  
REPORT OF DR. EDWARD E. LEAMER**

Date: January 17, 2013  
Time: 1:30 p.m.  
Courtroom: 8, 4th Floor  
Judge: The Honorable Lucy H. Koh

**Table of Contents**

I. INTRODUCTION ..... 1

II. LEAMER’S WORK FAILS THE STANDARDS OF *DAUBERT* AND  
RULE 702 ..... 3

    A. Leamer Cannot Reliably Fulfill His Role As An Expert Economist  
        Because His Opinions Ignore The Basic Market Facts..... 4

    B. Leamer’s “Conduct Regression” Is Deeply Flawed In Its Methodology  
        And, Properly Considered, Shows That There Was No Class-Wide Injury ..... 9

        1. Figure 19 ..... 10

        2. The Conduct Regressions..... 11

        3. Leamer’s Methodology Underlying His Conduct Regressions Is  
            Inconsistent With His Other Necessary Opinion ..... 15

    C. Leamer’s “Common Factors” Analyses Are Deficient And Unreliable ..... 16

        1. Leamer’s “Common Factors” Regressions, By Themselves, Do  
            Not Purport To Answer The Relevant Question ..... 17

        2. Leamer Admits Figures 15 and 16, On Which He Relies, Cannot  
            Answer the Relevant Question..... 18

III. CONCLUSION ..... 23

**Table of Authorities**

**CASES**

<i>Abaxis, Inc. v. Cepheid</i> , 2012 U.S. Dist. LEXIS 100530, at *3 (N.D. Cal.).....	3
<i>Brooke Group Ltd. v. Brown &amp; Williamson Tobacco Corp.</i> , 509 U.S. 209 (1993).....	4
<i>Champagne Metals v. Ken-Mac Metals, Inc.</i> , 458 F.3d 1073 (10th Cir. 2006).....	4
<i>Concord Boat Corp. v. Brunswick Corp.</i> , 207 F.3d 1039 (8th Cir. 2000).....	4
<i>Craftsmen Limousine, Inc. v. Ford Motor Co.</i> , 363 F.3d 761 (8th Cir. 2004).....	12
<i>Daubert v. Merrell Dow Pharms.</i> , 43 F.3d 1311 (9th Cir. 1995).....	14
<i>Daubert v. Merrell Dow Pharms., Inc.</i> , 509 U.S. 579 (1993).....	1,9,22
<i>Ellis v. Costco Wholesale Corp.</i> , 657 F.3d 970 (9th Cir. 2011).....	1,3
<i>LaserDynamics, Inc. v. Quanta Computer, Inc.</i> , 2011 U.S. Dist. LEXIS 42590, at *6 (E.D. Tex.) .....	9
<i>General Electric Co. v. Joiner</i> , 522 U.S. 136 (1997).....	3,22
<i>Group Health Plan, Inc. v. Philip Morris USA, Inc.</i> , 344 F.3d 753 (8th Cir. 2003).....	10,15
<i>Heary Bros. Lightning Prot. Co. v. Lightning Prot. Inst.</i> , 287 F. Supp. 2d 1038 (D. Az. 2003).....	9
<i>Heller v. Shaw Indus., Inc.</i> , 167 F.3d 146 (3d Cir. 1999).....	4
<i>In re TFT-LCD (Flat Panel) Antitrust Litig.</i> , 2012 U.S. Dist. LEXIS 21696 (N.D. Cal.).....	15
<i>In re TMI Litig.</i> , 193 F.3d 613 (3d Cir. 1999).....	21,22
<i>Johnson v. Manitowoc Boom Trucks</i> , 484 F.3d 426 (6th Cir. 2007).....	14

1	<i>Lukov v. Schindler Elevator Corp.</i> ,	
2	2012 U.S. Dist. LEXIS 88415, at *9 n.4 (N.D. Cal.).....	4
3	<i>Menasha Corp. v. News Am. Mktg. In Store Servs., Inc.</i> ,	
4	354 F.3d 661 (7th Cir. 2004).....	9,12
5	<i>Piggly Wiggly Clarksville, Inc. v. Interstate Brands Corp.</i>	
6	100 Fed. Appx. 296 (5th Cir. 2004).....	10
7	<i>Reed v. Advocate Health Care</i> , 268	
8	F.R.D. 573 (N.D. Ill. 2009).....	19
9	<i>Stein v. Pac. Bell</i> ,	
10	2007 U.S. Dist. LEXIS 19193, at *30 (N.D. Cal.).....	4
11	<i>TK-7 Corp. v. Estate of Barbouti</i> ,	
12	993 F.2d 722 (10th Cir. 1993).....	22
13	<i>United States v. Hermanek</i> ,	
14	289 F.3d 1076 (9th Cir. 2002).....	3
15	<i>Wagner v. County of Maricopa</i> ,	
16	673 F.3d 977 (9th Cir. 2012).....	3

### **RULES**

17	Fed. R. Evid. 702 .....	1,3
----	-------------------------	-----

### **ARTICLES**

17	Leamer, Edward E., <i>Let's Take the Con out of Econometrics</i> ,	
18	73 Am. Econ. Rev. 31, 38 (1983) .....	11,16
19	Leamer, Edward E., <i>Tantalus on the Road to Asymptopia</i> ,	
20	24 J. Econ. Persp. 31, 32 (2010) .....	14

**TO PLAINTIFFS AND THEIR ATTORNEYS OF RECORD:**

**PLEASE TAKE NOTICE** that on January 17, 2012 at 1:30 p.m., in the courtroom of the Honorable Lucy H. Koh, of the above-entitled Court (Courtroom 8), Defendants Intel Corporation, Pixar, Adobe Systems, Inc., Intuit Inc., Google Inc., Apple Inc., and Lucasfilm Ltd. (collectively “Defendants”) shall and do hereby move for an order excluding the opinions and testimony of Dr. Edward E. Leamer (“Leamer”), designated by plaintiffs Michael Devine, Mark Fichtner, Siddharth Hariharan, Brandon Marshall, and Daniel Stover (collectively “Plaintiffs”) as an expert witness in this matter, for his failure to provide reliable, relevant and admissible testimony under *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993) and Federal Rule of Evidence 702. Defendants’ motion is based on the authorities and evidence set forth herein, the accompanying declaration and exhibits, the Report of Professor Kevin M. Murphy, the class certification and other pleadings on file in this matter, oral argument to be presented to the Court, and such other matters as the Court may consider.

**I. INTRODUCTION**

Dr. Leamer’s testimony fails to meet the standards required by *Daubert* and Rule 702.<sup>1</sup> His opinions are offered to show that “all or nearly all” class members were undercompensated as a result of several bilateral agreements among certain pairs of Defendants not to cold call each other’s employees. [REDACTED]

[REDACTED] Defendants submit that sworn testimony makes Leamer’s entire report and all of his opinions unhelpful and inadmissible under Rule 702 and *Daubert* because, even on their own terms, they cannot support the use of common evidence to prove injury to all or nearly all class members.

<sup>1</sup> As discussed in Defendants’ opposition to class certification, even if any of Leamer’s opinions were to be admitted, they would not suffice to support certification for many reasons, including, as discussed below, because they show that a very large percentage of class members were not injured. *See Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 983-84 (9th Cir. 2011).

Beyond that, Leamer breached professional standards and failed the *Daubert* test by

[REDACTED] As

relevant to this motion, his analysis has two steps. In Step 1, he opines that the agreements suppressed “information flow” about available jobs and compensation and slowed down the “price discovery” process, resulting in “generalized compensation suppression” for Defendants’ employees. Report ¶ 11(b).<sup>2</sup> In Step 2, Leamer opines that generalized suppression would have been transmitted from individual employees who failed to receive a cold call resulting in greater compensation to “all or nearly all [*sic*] class members,” through Defendants “somewhat rigid wage structures,” which are a product of their “internal equity” policies. *Id.* 11(c).

Leamer’s opinions about the effects of an alleged suppression of competition on class members’ compensation are supported by no factual knowledge of competition in the labor markets he purports to address, the extent of any information suppression, or the actual effect on any class members, let alone “all or nearly all” of them. Instead, his opinions depend almost entirely on two statistical models he constructed. Leamer relies, for Step 1, on “conduct regressions” used to estimate the aggregate or “generalized” under-compensation for each class [REDACTED]; and, for Step 2, on a “common factors” analysis (a regression and some charts) to support the idea that “all or nearly all” members of each class experienced that impact.<sup>3</sup>

Not only does Leamer’s statistical work not come close to having the precision or rigor required to support his ambitious conclusions of class-wide impact, it actually shows just the opposite. Under Step 1, Leamer’s centerpiece “conduct regressions” (taken at face value) show that at least some Defendants paid their employees *more because of the challenged conduct*.

<sup>2</sup> Deposition testimony is cited as “[Deponent] [Page:Line]”. All deposition excerpts are attached to the accompanying Declaration of Susan J. Welch (“Welch Decl.”). Leamer’s report is cited as “Report ¶ \_\_\_” (Dkt. No. 190) (sealed version lodged on Oct. 2, 2012). Defendants’ expert Kevin Murphy’s Report is cited as “Murphy ¶ \_\_\_.”

<sup>3</sup> Leamer has only one “conduct regression” model, but he applies it to both the All Employee Class and the Technical Class. Similarly, his “common factors” regression model is repeated over several years and for both classes. Thus, each of the two regressions is referred to at times in both the singular and plural.

1 This is a result of simply taking Leamer's regression model and generating results separately for  
 2 each Defendant. The conclusion that the agreements caused some Defendants to pay more is the  
 3 opposite of Leamer's theory and shows that the only test he has created to measure the impact of  
 4 the conduct disproves Plaintiffs' claim. [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] so by definition

11 irrelevant and unhelpful to resolve the issues before the Court. (pp. 16-22, below)

12 Leamer's uninformed, untested, and subjective opinions are unreliable and inadmissible.

## 13 **II. LEAMER'S WORK FAILS THE STANDARDS OF *DAUBERT* AND RULE 702**

14 The *Daubert* standard for expert opinion testimony applies at the class certification stage.  
 15 *Ellis*, 657 F.3d at 982. *Daubert* "applies to all (not just scientific) expert testimony." *United*  
 16 *States v. Hermanek*, 289 F.3d 1076, 1093 (9th Cir. 2002). Expert testimony is admissible only if  
 17 "(1) [it] is based upon sufficient facts or data; (2) [it] is the product of reliable principles and  
 18 methods; and (3) the expert has reliably applied the principles and methods to the facts of the  
 19 case." Fed. R. Evid. 702. The expert's analysis should be "supported by the typical *Daubert*  
 20 factors – testing, peer review and general acceptance." *Wagner v. County of Maricopa*, 673 F.3d  
 21 977, 982 (9th Cir. 2012). Expert testimony must be "both relevant and reliable." *Abaxis, Inc. v.*  
 22 *Cepheid*, 2012 U.S. Dist. LEXIS 100530, at \*3 (N.D. Cal.).

23 An expert's "conclusions and methodology are not entirely different from one another."  
 24 *General Electric Co. v. Joiner*, 522 U.S. 136, 146 (1997). "[N]othing in either *Daubert* or the  
 25 Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to  
 26 existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too  
 27 great an analytical gap between the data and the opinion proffered." *Id.* Thus, "a district court  
 28 must examine the expert's conclusions in order to determine whether they could reliably follow

from the facts known to the expert and the methodology used.” *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 153 (3d Cir. 1999); *Lukov v. Schindler Elevator Corp.*, 2012 U.S. Dist. LEXIS 88415, at \*9 n.4 (N.D. Cal.) (“[W]hen an expert opinion is based on data, a methodology, or studies that are simply inadequate to support the conclusions reached, Daubert and Rule 702 mandate the exclusion of that unreliable opinion testimony.”).

The issue is not whether Leamer’s methodologies (*e.g.*, regression analysis) are reliable in some abstract sense, but whether his application of them is proper and reliable for the specific purposes for which his opinions are offered. *See id.* As shown in the following sections, Leamer’s work cannot reliably show either “generalized” injury or any injury that would be “experienced by all or nearly all” class members. Report ¶¶ 11(b) & (c).

**A. Leamer Cannot Reliably Fulfill His Role As An Expert Economist Because His Opinions Ignore The Basic Market Facts**

“The role of the expert economist in antitrust cases is to apply microeconomic theory to the messy facts of a case.” *Champagne Metals v. Ken-Mac Metals, Inc.*, 458 F.3d 1073, 1080 n.4 (10th Cir. 2006). Expert opinions may interpret market facts, but may not substitute for them. *See Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993); *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1056-57 (8th Cir. 2000) (reversing admission of expert’s model that failed to account for market events); *Stein v. Pac. Bell*, 2007 U.S. Dist. LEXIS 19193, at \*30-31 (N.D. Cal.) (excluding expert who did not conduct independent research, interview anyone, or otherwise study market facts).

Leamer theorizes that the no cold call agreements suppressed labor market competition by reducing “information flow” and caused class-wide effects on Defendants’ setting of compensation. His theories have no application to “the messy facts of [the] case” because he does not know them or, to the extent he does, they contradict his opinions. [REDACTED]

- *The labor markets in which Defendants compete.* [REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- *The degree of competition among Defendants for labor, whether measured by hiring or cold calling.* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In fact, *only 1%* of Defendants'

employee hires and losses both during and outside the class period were from and to

other Defendants. Murphy, p. 8, Table 1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- *Which firms Defendants considered in setting compensation.* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The simple fact that Defendants successfully hired

some *40,000 new workers* during the class period proves the implausibility of Leamer's

claim that their average salaries were suppressed by as much as 20 percent. Murphy, p. 6 (Opinion 1).

- *The level of information either transmitted or suppressed, during the class period.*

[REDACTED]

- *How his hypothesized additional information flow in the but for world could have rippled throughout the Defendant companies (much less the entire market) to raise all class members' compensation.* [REDACTED]

[REDACTED]

<sup>4</sup>

[REDACTED]

- 1 [REDACTED]  
 2 [REDACTED]  
 3 [REDACTED]  
 4 [REDACTED]  
 5 [REDACTED]  
 6 [REDACTED]  
 7 [REDACTED]
- 8 • *Whether, under his theory, some class members actually benefited as a result of the no*  
 9 *cold call agreements.* [REDACTED]

10 [REDACTED] The people who filled them would have been worse off if increased cold  
 11 calling caused them to lose out in favor of someone else. For example, if Apple could  
 12 not cold call Adobe employees, so that a Microsoft employee got a job at Apple in the  
 13 real world that an Adobe employee would have gotten but-for the agreement, the  
 14 Microsoft employee (a class member) benefited. [REDACTED]

15 [REDACTED] It is  
 16 undeniably true, and a significant predominance problem. Murphy, pp.9-10 (Opinion 3).<sup>6</sup>

17 [REDACTED]  
 18 [REDACTED]  
 19 [REDACTED] Thus, any greater compensation to some employees absent the  
 20 agreements could have meant less for others. Murphy ¶¶ 87-88.

21  
 22 \_\_\_\_\_  
 23 <sup>5</sup> Leamer relies heavily on the “Big Bang” wage increase at Google in 2010, after the “conduct  
 24 period,” to support his theory of class-wide harm (Report ¶¶ 107-19), but that market fact  
 25 actually refutes his theory. Leamer does not claim any other Defendant raised its compensation  
 26 in response to that well-publicized development, notwithstanding Google’s marketplace  
 27 significance and Leamer’s finding that other Defendants “paid close attention” to it. *Id.* ¶ 118.  
 28 Murphy’s analysis shows there was no such common wage hike. Murphy App’x 3A-B. [REDACTED]

26 [REDACTED]  
 27 <sup>6</sup> [REDACTED] is logically and  
 28 economically irrelevant. Absent the challenged agreements, the employee would not have been  
 working at Apple. She would have remained at Microsoft. Murphy, fn. 44.

- 1 • *What the named plaintiffs, who compete in the relevant labor markets, have to say about*  
2 *the facts* [REDACTED]

3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]

15 Leamer's lack of knowledge or analysis leads him to absurd conclusions. [REDACTED]

16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED] theory of impact is

26 unsupported by any evidence, untested, unstudied, and, at best, unreliable "armchair economics."  
27  
28

*Menasha Corp. v. News Am. Mktg. In Store Servs., Inc.*, 354 F.3d 661, 664 (7th Cir. 2004) (economist opinion inadmissible where it was untested and unsupported by the evidence).<sup>7</sup>

Because Leamer [REDACTED] that (a) Defendants' agreements actually, or conceivably could have, materially reduced the "information flow" he claims gives rise to the "price discovery" on which his theory depends, or (b) any such reduction could have produced a class-wide, as opposed to highly individualized (both positive and negative) effect, Leamer's opinions are not "tied to the facts of the case" and thus unhelpful to the Court's class certification decision. F.R.E. 702; *Daubert*, 509 U.S. at 591; *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 2011 U.S. Dist. LEXIS 42590, at \*6-8 (E.D. Tex.) (excluding opinion where "expert offer[ed] no credible economic analysis to support [his] conclusion"). To the extent Leamer knows the market facts, they contradict those opinions. An expert opinion contrary to the facts has no relevance and is inadmissible. *See Concord Boat*, 207 F.3d at 1057 (reversing admission where opinion "did not incorporate all aspects of the economic reality of the [relevant] market"); *Heary Bros. Lightning Prot. Co. v. Lightning Prot. Inst.*, 287 F. Supp. 2d 1038, 1065-66 (D. Az. 2003) (excluding expert opinion where his assumptions contradicted the market facts in the record).

**B. Leamer's "Conduct Regression" Is Deeply Flawed In Its Methodology And, Properly Considered, Shows That There Was No Class-Wide Injury**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] "Multiple

<sup>7</sup> Another economically senseless implication of Leamer's theory is that if any Defendant cold called and then hired an employee at 25% above its existing compensation "structure," it would have to raise all employees' compensation by 25%. That would turn a simple hiring decision into a multi-million dollar (or more) endeavor (for example, \$25,000 x 4,000 employees = \$100,000,000). Murphy ¶ 100. Why would any company make that hire?

1 regression analysis is not a magic formula.” *Piggly Wiggly Clarksville, Inc. v. Interstate Brands*  
 2 *Corp.* 100 Fed. Appx. 296, 299-300 (5th Cir. 2004). Leamer’s cure-all conduct regression is not  
 3 the product of a reliable methodology, so it and the essential opinions Leamer derives from it are  
 4 inadmissible. *See Group Health Plan, Inc. v. Philip Morris USA, Inc.*, 344 F.3d 753, 760 (8th  
 5 Cir. 2003) (expert testimony was premised on a “counterfactual world” and “entail[ed] a great  
 6 deal of speculation, for although his estimations [we]re oriented in real-world examples and data  
 7 points, his use of them often involve[d] inferences that approach[ed] leaps of faith”).

8 Leamer’s methodology, broadly speaking, is to compare Defendants’ compensation  
 9 during the class or “conduct” period to their compensation before and after that period. He  
 10 presents two before-and-after comparisons: one is illustrated in his Figure 19 and the other is the  
 11 product of his “conduct regressions.” Report ¶¶ 138-41. [REDACTED]

12 [REDACTED]  
 13 [REDACTED]  
 14 [REDACTED]  
 15 [REDACTED]

16 [REDACTED] However, both analyses suffer from the same basic problem (among many others):  
 17 Leamer’s methodology actually shows *large portions of the class were not injured*. This is not a  
 18 matter of interpretation or theory; it is a direct and provable outcome of Leamer’s own work.

### 19 1. Figure 19

20 In Figure 19, Leamer defines the years 2005-2009 as “conduct” years, meaning they are  
 21 during the effective period of the challenged agreements, and the other years (2002-04 and 2010-  
 22 11) as non-conduct years. Leamer uses Figure 19 to illustrate the hypothetical average under-  
 23 compensation (9.5% to 12.9%, depending on the year) for all Defendants collectively during the  
 24 “conduct” period. Report ¶ 63. He does not report the figures for each Defendant separately.  
 25 Murphy has done so, using Leamer’s exact methodology, and the results show that *five* of the  
 26 Defendants *paid higher compensation increases during the conduct years* than the non-conduct  
 27 years. Murphy ¶¶ 107-09. This is a striking result. It is not a situation where a few isolated  
 28 employees may have done better during the conduct years. Here, for entire Defendants,

1 Leamer's method shows the opposite of impact. [REDACTED]

2 [REDACTED].

## 3 2. The Conduct Regressions

4 Leamer's conduct regression is much more complex, but suffers from the same basic  
 5 flaw. Generally speaking, a "regression model" is a statistical method for using data to  
 6 understand (or "estimate" or "predict") the average relationship between one or more factors  
 7 (represented in the model by "independent variables") and a "dependent" variable. In this case,  
 8 Leamer used compensation data during the "conduct" period and the periods before and after to  
 9 try to identify the average effect of the challenged agreements on compensation (the "dependent"  
 10 variable), taking into account the effects of other independent "control" variables (e.g., seniority,  
 11 San Jose employment levels). Report, Figures 20-21. He refers to the estimated average effect  
 12 of the agreements as the "coefficient" on his "CONDUCT" independent variable. *Id.* ¶ 146.  
 13 From that, he calculates an average alleged under-compensation by Defendant by year for each  
 14 class. *Id.*, Figures 22 & 24. [REDACTED]

15 [REDACTED]

16 Leamer admits it is "important" to test a regression model's "sensitivity" "before you rely  
 17 on it." Leamer 351:1-3, 356:1-7, 358:19-24. He has written a peer reviewed article stating as  
 18 much. *See* Edward E. Leamer, *Let's Take the Con out of Econometrics*, 73 Am. Econ. Rev. 31,  
 19 38 (1983) (Welch Decl., Ex. G). [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

27

28

1 [REDACTED]  
 2 [REDACTED]  
 3 [REDACTED]  
 4 [REDACTED]  
 5 [REDACTED]  
 6 [REDACTED] So,  
 7 when Leamer reports under-compensation by Defendant by year [REDACTED]  
 8 [REDACTED], much like in Figure 19, that does not mean his model estimates that each  
 9 Defendant under-compensated its employees each year. It does not. [REDACTED]  
 10 [REDACTED]  
 11 [REDACTED]. *See Menasha*, 354 F.3d at 665-66 (it was  
 12 possible to test the expert's opinion, but he defined a relevant market by assumption, not testing;  
 13 "Garbage in. Garbage out."); *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 363 F.3d 761, 777  
 14 (8th Cir. 2004) (error to admit expert report where it assumed the conclusion and failed to  
 15 analyze relevant factors).

16 Murphy has run Leamer's regression model for each Defendant separately, but otherwise  
 17 replicating Leamer's methodology. The results are remarkable. Of the seven Defendants, *two*  
 18 *show over-compensation in all years*, and three (including the two largest Defendants) show a  
 19 mix of over- and under-compensation depending on the year. Murphy ¶¶ 116 Ex. 20. The same  
 20 results generally follow for both proposed classes. *Id.* Stated plainly, that means Leamer's own  
 21 model implies that in about half the Defendant-years that he purported to analyze, Defendants  
 22 *overpaid* their employees *because of the alleged conspiracy*. Therefore, Leamer's model cannot

23 \_\_\_\_\_  
 24 <sup>8</sup> Leamer claimed it was "more efficient" to "pool" all the defendants together in one model  
 25 because he found them "sufficiently similar" to avoid any "inaccuracy," based on "eyeballing"  
 26 the regression's results. Leamer 364:8-365:1, 365:14-366:2. There is a "formal test" to  
 determine whether Leamer's pooling decision was sound, but he did not run it. *Id.* 365:8-16. In  
 fact, when the results are separated by Defendant, they are not similar at all. Murphy ¶¶ 115-119  
 & Ex. 20.

27 <sup>9</sup> As discussed in this brief and in Murphy's report, Leamer's methodology has many conceptual  
 28 and methodological flaws, but this analysis accepts his basic methodology and asks whether it  
 actually shows under-compensation by all Defendants, as Leamer has reported.



1 be used to show injury to all class members because, on its own terms, it shows that large  
 2 portions of the class were not injured. *Id.* ¶ 119. [REDACTED]

3 [REDACTED]  
 4 [REDACTED] It does indeed. It also demonstrates that Leamer's failure to run the model  
 5 separately for each Defendant was poor science, given that he is supposed to be showing injury  
 6 to all class members, rather than just some average injury for an aggregated class. *See GPU*, 253  
 7 F.R.D. at 504 (criticizing plaintiffs' reliance on regressions, finding that they "would either be  
 8 overly reliant on averages and would thus sweep in an unacceptable number of uninjured  
 9 plaintiffs, or they would be unmanageably individualized.").

10 Leamer's model is also highly sensitive in two other key respects. First, using only the  
 11 post-conduct period (not the pre-conduct period) as a benchmark, which should not change  
 12 Leamer's findings if his theory were correct, in fact reverses them. The estimated "effect" is  
 13 *overcompensation for each of the seven defendants* - the exact opposite conclusion to the one  
 14 Leamer reached. Murphy ¶ 132 & Ex. 23. Second, even though equity was an important  
 15 component of many employees' compensation, Leamer does not control for changes in the value  
 16 of that equity compensation over time. His failure to control for obvious factor affecting  
 17 compensation caused the model to erroneously attribute compensation changes to the alleged  
 18 agreements. Murphy ¶¶ 134-137. Simply adding the change in the S&P 500 as a "control"  
 19 variable alters his results dramatically. Murphy ¶ 137 & Ex. 26. These results, according to  
 20 Leamer himself, indicate that his regression's conclusions are "fragile" and "not to be believed."  
 21 *See* Podcast: Leamer on the State of Econometrics (May 10, 2010)  
 22 ([http://www.econtalk.org/archives/2010/05/leamer\\_on\\_the\\_s.html](http://www.econtalk.org/archives/2010/05/leamer_on_the_s.html)) (An economist requires "a  
 23 *complete model with all the controls*"; "*That's a sensitivity issue* - we want to make sure that an  
 24 adequate range of alternative models has been studied and confirmed that all the reasonable  
 25 models lead to about the same conclusion, which is that you get the sturdy inference. Or, *if what*  
 26 *seem like small changes in the models, the kinds of things that economists would be willing*  
 27 *easily to entertain, lead to dramatically different conclusions – that's a fragile estimate, and not*  
 28 *to be believed.*") (emphasis added).

In sum, Leamer's regression methodology is unsupported by any of "the typical *Daubert* factors." *Wagner*, 673 F.3d at 982. It is not "generally accepted," but was "conceived, executed, and invented solely in the context of th[e] litigation"; indeed, its purported use expanded as Leamer was confronted at deposition with more issues he had failed to analyze. *See Johnson v. Manitowoc Boom Trucks*, 484 F.3d 426, 434-35 (6th Cir. 2007); *Daubert v. Merrell Dow Pharms.*, 43 F.3d 1311, 1317 (9th Cir. 1995) ("*Daubert II*") ("One very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying."). [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]<sup>0</sup> His methods also violate his own repeated peer-reviewed admonitions as to how proper econometrics should be performed. *See Apple, Inc. v. Samsung Electronics Co.*, 2012 U.S. Dist. LEXIS 90877, at \*29 (N.D. Cal.) (opinion excluded where no evidence showed expert's calculations were based on a generally accepted, peer-reviewed methodology).

Taking a step back, it is also important to keep in mind what Leamer's statistics are purporting to say, which is that an assumed but unknown reduction in "information flow" from these narrow restrictions on cold calling achieved a remarkable under-compensation of 2-20%. Report, Figures 22, 24. Therefore, upon Leamer's theory taken at face value, one of two things must be true. The first is that the relative handful of allegedly lost cold calls amidst the vast sea of "information flow" and "price discovery" that he admits was occurring "each and every day" during the class period allowed Defendants to suppress their compensation significantly below

<sup>10</sup> Leamer's own peer-reviewed article shows his methods applied here are not accepted or reliable. "Can we economists agree that it is extremely hard work to squeeze truths from our data sets and *what we genuinely understand will remain uncomfortably limited?* We need words in our methodological vocabulary to express the limits. *We need sensitivity analyses to make those limits transparent. Those who think otherwise should be required to wear a scarlet-letter O around their necks, for 'overconfidence.'*" Edward E. Leamer, *Tantalus on the Road to Asymptopia*, 24 J. Econ. Persp. 31, 32 (2010) (Welch Decl., Ex. H) (emphasis added).

1 market levels but still retain their employees [REDACTED]

2 [REDACTED] The alternative is  
3 that the hypothesized few lost cold calls managed to suppress compensation *in the entire vast*  
4 *labor markets in which Defendants competed* - at Microsoft, Facebook, Oracle, Amazon,  
5 Applied Materials, Electronic Arts, IBM, HP, eBay, Zynga, all startups, indeed [REDACTED]

6 [REDACTED] That fanciful market suppression would not be limited to software engineers  
7 like the plaintiffs, but would extend to accountants, administrative assistants, attorneys and a  
8 very long list of other employees, of which Defendants employ a tiny percentage. Neither  
9 scenario makes any economic sense, and Leamer does not and cannot defend either one. The  
10 admissibility of his work must be evaluated in light of its necessary implications. *See Joiner*,  
11 522 U.S. at 146 (opinion inadmissible where “there is simply too great an analytical gap between  
12 the data and the opinion proffered”).<sup>11</sup>

### 13 3. Leamer’s Methodology Underlying His Conduct Regressions Is 14 Inconsistent With His Other Necessary Opinion

15 Leamer built the conduct regression model based on a key assumption that is directly  
16 contrary to his own opinion of a “somewhat rigid wage structure.” The contradiction arises from  
17 the fact that, for purposes of the conduct regression, Leamer treated each employee’s data as if it  
18 provides *independent* information about the factors affecting compensation. That assumption  
19 squarely contradicts his other central theory that compensation within each Defendant is driven  
20 by “common factors” (i.e., is not independent, but correlated). Leamer cannot take conflicting  
21 positions with respect to his two central opinions. *See Group Health Plan*, 344 F.3d at 761  
22 (affirming exclusion where “the disconnect between [the damages expert’s] work and the  
23

24 <sup>11</sup> Leamer’s regression analysis essentially assumes what he is trying to prove. [REDACTED]  
25 [REDACTED]  
26 [REDACTED]

27 [REDACTED] Because the  
28 regression is not grounded in the evidence or any coherent theory based on the market facts, it is,  
at best, circular. *See In re TFT-LCD (Flat Panel) Antitrust Litig.*, 2012 U.S. Dist. LEXIS 21696  
(N.D. Cal.) (“Obviously, a model cannot be used to prove of one of its basic assumptions.”).



[plaintiff's] theory of liability weighs heavily against the admission of his testimony under *Daubert*"). [REDACTED]

Leamer's data independence assumption is necessary for the conduct regression to achieve "statistical significance." Murphy ¶ 120. His error, and its importance to any conclusion that can be drawn from his regression, is easily proved. A generally accepted method to take into account the fact that the observations on which the conduct regression is based reflect "groups" of observations that have some (although not complete) correlation is called "clustering" the standard errors. Murphy ¶ 125. Leamer failed to implement this (or any other) methodology to address the nature of his data, although he has mocked econometricians who rely on an erroneous assumption of data independence to achieve statistical significance. *See Let's Take the Con out of Econometrics* (Welch Decl., Ex. G), at 37-38 ("Sometimes I take the error terms to be correlated, sometimes uncorrelated. ... Does it depend on what I had for breakfast?").<sup>12</sup> Once that is done, so that the illusion of independence is removed, Leamer's conduct regression model produces no statistically significant result. Murphy ¶ 127 & Exs. 22A-B. Therefore, his regression results, and his opinions based on them, are scientifically unacceptable and unreliable according to his own peer review.

### C. Leamer's "Common Factors" Analyses Are Deficient And Unreliable

Leamer's second essential opinion derives from his "common factors" or "compensation structure" analyses, which consist of additional regressions (separate from the conduct regressions) and some charts. Report ¶¶ 120-34. [REDACTED]

[REDACTED] Thus, Leamer opines, compensation for the class members "tended to move together over time and in response to common factors." Report ¶ 130. Therefore, he concludes,

<sup>12</sup> [REDACTED]  
[REDACTED] That is exactly what he did here. Murphy ¶ 122.

1 “any generalized suppression of compensation due to the Agreements would be experienced by  
2 all or nearly all members of the” two putative classes. *Id.* ¶ 11(c); *id.* ¶ 64 (“compensation of  
3 employees tended to move together over time, such that the effects of Non-Compete Agreements  
4 are likely to be broadly felt”).

5 Leamer’s “common factors” analyses, like his conduct regressions, are the product of  
6 unsound methods, carefully designed and subjectively interpreted to suggest a result that is  
7 contrary to the real-world evidence. In the end, Leamer admits they actually cannot distinguish  
8 between two opposite conclusions; thus, they are not relevant to any issue before the Court. *See*  
9 *Daubert*, 509 U.S. at 591.

10 **1. Leamer’s “Common Factors” Regressions, By Themselves, Do**  
11 **Not Purport To Answer The Relevant Question**

12 Leamer reports that his “common factors” regressions reveal that the factors he chose to  
13 include (the “independent variables”) can explain most of the variation in employee  
14 compensation (the “dependent variable”) *at a single “point in time.”* Report ¶¶ 129-30  
15 (emphasis added).<sup>13</sup> Even if that were true, his approach is irrelevant to the issue before the  
16 Court, as Leamer himself defines it, because he admits they do not show “*changes of*  
17 *compensation over time*,” even within any job title. Leamer 218:6-8, 236:15-22 (emphasis  
18 added). Therefore, they cannot address the issue for which they are offered, which is whether  
19 different employees’ compensation “move[s] together over time” (*id.* 206:11-17, 207:3-5), so  
20 that one employee’s increased compensation from a cold call would cause an increase in “all or  
21 nearly all” other employees’ compensation.

22  
23  
24  
25 <sup>13</sup> Leamer’s claim the regressions explain “almost the entire variation in salaries within each  
26 firm” is untrue. On their face, they fail to explain as much as 38% [REDACTED]  
[REDACTED] Report, p.58 (Figure 14).

27 [REDACTED] Moreover, because of the nature of Leamer’s statistical analysis, the  
28 “explained” percentages in Figures 12 and 14 *do not* reveal the *actual* unexplained variation of  
compensation *in dollars*, which would be much greater. *Id.* 217:16-22.

Consider this simplified example of three employees with the same job title:

	<u>Year 1</u>	<u>Year 2</u>
Employee A	\$130,000	\$120,000
Employee B	\$125,000	\$125,000
Employee C	\$120,000	\$130,000

In this example, the *variation* in compensation *at each “point in time,”* which is all that Leamer’s “common factors” regression shows, is the same because within each year one employee makes \$130k, one makes \$125k, and one makes \$120k.

The compensation of Employees A and C are moving in *opposite* directions over time.<sup>14</sup>

Moreover, the class consists of employees with thousands of *different* job titles.

Report pp. 59-60. As explained below, those analyses

prove that it is entirely unsupported and unreliable.

## 2. Leamer Admits Figures 15 and 16, On Which He Relies, Cannot Answer the Relevant Question

Both Leamer’s premise and - he ultimately admits - his conclusion are unreliable and incorrect.

<sup>14</sup> The common factors regression contains another basic flaw. Assume a firm has only two job titles: a junior position paying \$100k and a senior position paying \$150k. This is a perfectly rigid pay structure, far beyond anything Leamer has found here. But even under these extreme circumstances, Leamer’s approach proves nothing. Assume a junior employee receives a cold call and, in response, the firm promotes him to a senior position paying \$150k. There is no ripple effect whatsoever. The firm’s rigid pay structure allows it to respond to the cold call by giving that employee, and only that employee, a promotion. Nothing in its structure requires it to raise any other junior employee’s pay. And, it makes a lot more sense to give just this one employee a \$50k promotion rather than Leamer’s assumed outcome that the firm would keep him as a junior employee and raise his pay, and that of every other junior employee.



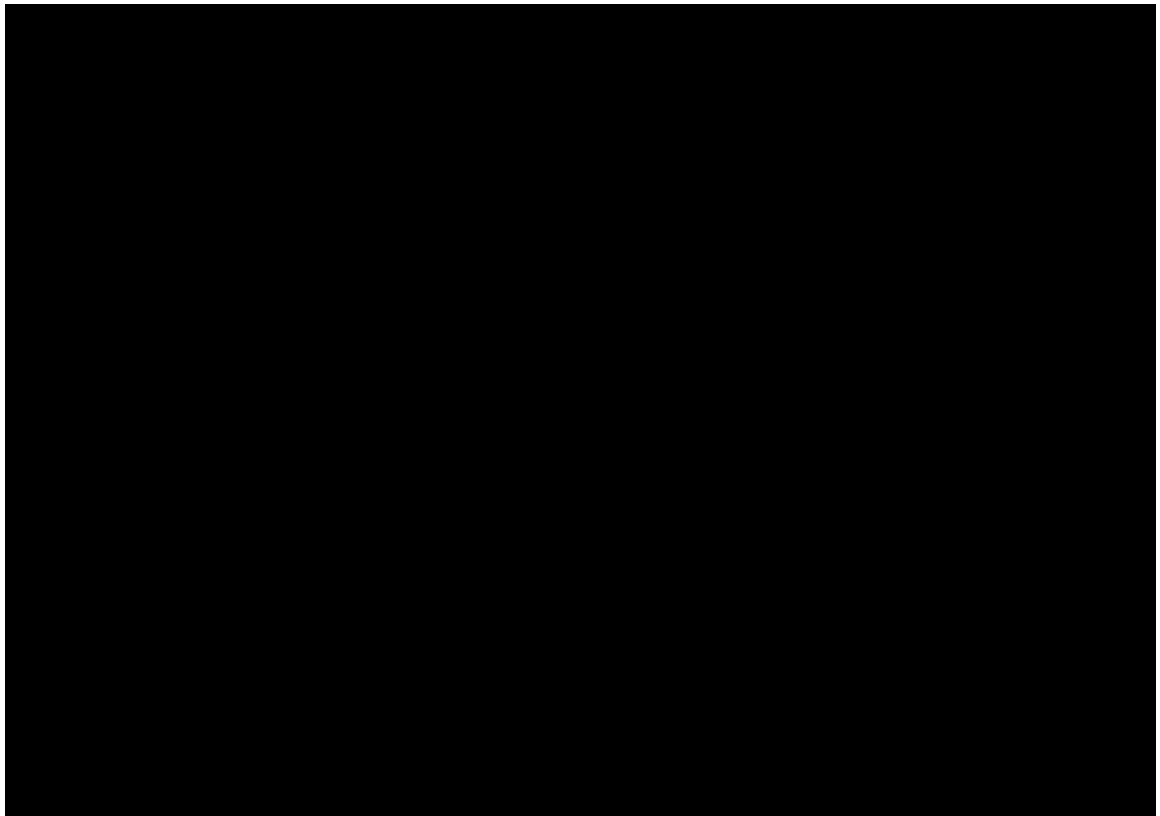
1 First, Figures 15-17 are biased in Leamer's favor but still do not support his conclusion.  
 2 In all three charts, Leamer has averaged all employees within each job title depicted [REDACTED]  
 3 [REDACTED]. This reliance on averages is  
 4 inappropriate to begin with, because it obscures the key question Leamer identifies of whether  
 5 "all or nearly all" class members' compensation "moves together over time." *See GPU*, 253  
 6 F.R.D. at 494 ("Averaging masks the differences and by definition glides over what may be  
 7 important differences."); *Reed v. Advocate Health Care*, 268 F.R.D. 573, 591 (N.D. Ill. 2009)  
 8 (expert's reliance on averages was a "fundamental flaw" because variations in pay are central to  
 9 class certification analysis).<sup>15</sup>

10 Even so, Leamer's charts still show many examples where the compensation of entire  
 11 groups of employees (by title) moves in different directions or moves in the same direction but at  
 12 very different rates, such that the lines cross. This is the *opposite* of his claim that compensation  
 13 "moves together" and the charts show "smooth movement over time." [REDACTED]

14 [REDACTED]  
 15 [REDACTED]  
 16 [REDACTED]  
 17 [REDACTED]  
 18 [REDACTED],<sup>16</sup>

19  
 20  
 21  
 22 <sup>15</sup> [REDACTED]  
 23 [REDACTED]

24 [REDACTED]  
 25 [REDACTED]  
 26 [REDACTED]  
 27 [REDACTED]  
 28 [REDACTED]



Despite these obviously disparate movements over time, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Leamer's subjective judgments about the charts he chose to display, which were "not carefully" reached, are untested, untestable, and have an admittedly high "error rate" because two experts could simply disagree about how the charts look. *See Daubert II*, 43 F.3d at 1319 (opinion inadmissible when based on personal opinion, not science);



1 *Oddi v. Ford Motor Co.*, 234 F.3d 136, 158 (3d Cir. 2000) (opinion inadmissible where expert  
2 “used little, if any, methodology beyond his own intuition”).

3 Leamer’s methodology gets worse. [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED] Placing blind faith in staff

24 members “in the heat of the moment” is not reliable science. *In re TMI Litig.*, 193 F.3d 613,

25 715-16 (3d Cir. 1999) (affirming exclusion where expert’s “failure to assess the validity of the

26 opinions of the experts he relied upon together with his unblinking reliance on those experts’

27 opinions, demonstrate[d] that the methodology he used to formulate his opinion was flawed

28 under Daubert as it was not calculated to produce reliable results”); *TK-7 Corp. v. Estate of*

1 *Barbouti*, 993 F.2d 722, 732 (10th Cir. 1993) (opinion inadmissible where expert’s “lack of  
2 familiarity with the methods and the reasons underlying [non-testifying expert’s] projections  
3 virtually precluded any assessment of the validity of the projections through cross-  
4 examination”).

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] Therefore, the entire equivocal exercise collapses into a massive analytical  
11 gap between Leamer’s opinion and the supposed support for it. *See Joiner*, 522 U.S. at 146.

12 Leamer’s “common factors” analysis cannot and does not answer the question he  
13 identifies as relevant, so it does not “fit” any issue in the case and, in any event, is subjective,  
14 unreliable and therefore inadmissible several times over. *See Daubert*, 509 U.S. at 591; *In re*  
15 *TMI Litig.*, 193 F.3d at 670 (reversing admission of opinion unconnected to “the particular  
16 disputed factual issues in the case”).

**III. CONCLUSION**

Leamer's opinions relating to both "generalized" and "class-wide" impact are unreliable, and should be excluded.

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1 **ATTESTATION:** Pursuant to General Order 45, Part X-B, the filer attests that concurrence in  
2 the filing of this document has been obtained from all signatories.

3  
4 /s/ Frank M. Hinman

5 Frank M. Hinman  
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